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UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

SAN JOSE DIVISION

SENSOR ELECTRONIC) Case No.: 5:18-cv	-05194-LHK
TECHNOLOGY, INC., a New York Corporation)) PLAINTIFF'S R) CONSTRUCTIO	
Plaintiff,)	
VS.) Complaint Filed:	August 24, 2018
BOLB, INC., a Delaware Corporation, QUANTUM EGG, INC., a Delaware Corporation)))	
Defendants.))	

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Pursuant to Northern District of California Patent Local Rule 4-5(c) and this Court's Scheduling Order (Dkt. 35), Plaintiff Sensor Electronic Technology, Inc. ("SETi" or "Plaintiff") hereby files its responsive claim construction brief.

REPLY TO DEFENDANTS' LEGAL-STANDARDS DESCRIPTION I.

Defendants' Introduction states that "the Court needs to construe the terms when the scope of the claim is in dispute." (Dkt. 60 at 1). Similarly, Defendants cite Eon Corp. IP Holdings LLC v. Silver Spring Net., Inc. 815 F.3d 1314 (Fed. Cir. 2016) for the proposition that "when a dispute about the claim scope exists, it is legal error for a court to leave terms unconstrued for the jury as 'plain and ordinary meaning." *Id.* at 1-2. Defendants' interpretation of the law – that district courts are obligated expressly construe every term for which a party purports to present a dispute – is incorrect. The proper standard was stated as follows in *Eon Corp*.:

In O2 Micro, this court held that "[w]hen the parties present a fundamental dispute regarding the scope of a claim term, it is the court's duty to resolve it." . . . This duty resides with the court because . . . "the ultimate question of construction [is] a legal question."... Thus, "[a] determination that a claim term 'needs no construction' or has the 'plain and ordinary meaning' may be inadequate when a term has more than one 'ordinary' meaning or when reliance on a term's 'ordinary' meaning does not resolve the parties' dispute."

Eon Corp., 815 F.3d at 1318. To be sure, resolution may take the form of an express construction. However, plain and ordinary meaning is a proper construction so long as it resolves any fundamental disputes. See, e.g., Finjan, Inc. v. Sonicwall, Inc., No. 17-CV-04467, 2019 WL 1369938, at *15 (N.D. Cal. Mar. 26, 2019); Avocent Huntsville, LLC v. ZPE Sys., Inc., No. 17-CV-04319, 2018 WL 4677437, at *13 (N.D. Cal. Aug. 23, 2018). As the Federal Circuit explained in U.S. Surgical Corp. v. Ethicon, Inc., 103 F.3d 1554 (Fed. Cir. 1997):

The Markman decisions do not hold that the trial judge must repeat or restate every claim term in order to comply with the ruling that claim construction is for the court. Claim construction is a matter of resolution of disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims, for use in the determination of infringement. Id. at 1568.

All emphasis here is added unless otherwise described.

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II. **DISPUTED CONSTRUCTIONS**

"cover" ('965 patent, claim 1) 1.

Claim Term	Plaintiff's Proposal	Defendants' Proposal	
"cover"	, .	"a lid or cap that seals the case when closed or attached"	

As discussed in SETi's Opening Brief, there appear to be two distinct disputes: whether to replace the term "cover" with "lid or cap" and whether to import a functional requirement into the structural recitation. (Dkt. 58 at 4-5.)

As to the first issue, Defendants claim that "cover' and 'cap' are used interchangeably in the specification" and that the "cover" of the powder compact in figure 12B is a "lid." (Dkt. 60 at 2.) Nowhere, however, do Defendants identify an actual dispute. In other words, rather than identify a substantive difference between the claim as drafted and the correct meaning to be presented to the jury, Defendants merely restate the claim using similar terms. Identifying synonyms is not proper claim construction. Karl Storz Endoscopy-Am., Inc. v. Stryker Corp., No. 14-CV-00876, 2016 WL 3597426, at *10 (N.D. Cal. July 5, 2016) ("substitution of synonyms does not provide additional clarity"). Defendants presumably intend to later assert that the infringing structure is not a cap or lid because those structures must have [...]. It is that hidden construction that is the dispute, which should be deemed waived.

In addition, Defendants' assertion of interchangeability (Dkt. 60 at 2), cannot withstand scrutiny. As SETi explained in its Opening Brief, the '965 patent uses the phrase "covers (e.g., caps)." (Dkt. 58 at 5 (citing '965 patent at 2:7-8).) Defendants fail to address the '965 patent's express identification of caps as examples of covers. See New v. Dep't of Veterans Affairs, 142 F.3d 1259, 1265 (Fed. Cir. 1998) (explaining the difference between the Latin abbreviations i.e. and *e.g.*).

For its second argument, Defendants quote four passages from the claim to suggest "the cover seals the case when closed so that neither the liquid nor the ultraviolet radiation can escape." (Dkt. 60 at 3.) Yet, none of the quoted passages require (or even imply) that the cover must provide a seal against escape. Indeed, to the extent those other recitations support that requirement,

Defendants would have been better served basing its argument on those terms than the indisputably broad claim term "cover."

For its third argument, Defendants assert that a non-sealing cover was disclaimed. (Dkt. 60 at 3.) As the Federal Circuit has repeatedly held, a disclaimer must be "clear and unmistakable." *Thorner v. Sony Computer Entm't Am. LLC*, 669 F.3d 1362, 1366-67 (Fed. Cir. 2012). The full prosecution history passage provides:

[T]he Office cites reference 14[0] of Palmer as allegedly disclosing the ultraviolet radiation containing case of claim 1. However, Applicant notes that Palmer does not disclose that the chamber 140 encloses a volume corresponding to a flowable product as in claim 1. In contrast, the chamber 140 is described as being within a closed airflow path. Palmer, 0052. As shown and described in FIG. 6 of Palmer, the chamber 140 can include a cover 620. However, the cover 620 does not selectively close and open the chamber 140, which still allows air to pass through the baffle 420 regardless of the position of the cover 620.

(Dkt. 62-1 at 9.) The applicants' argument was that figure 6's UVC Kill Chamber 140 (as shown

in figure 6 reproduced to the right) did not "enclose[] a volume corresponding to a flowable product," but instead was designed to remain open via an "airflow path" so that air (the purported flowable product) was able to continuously pass through the chamber. (*Id.*) Thus,

Defendants' assertion that the applicants

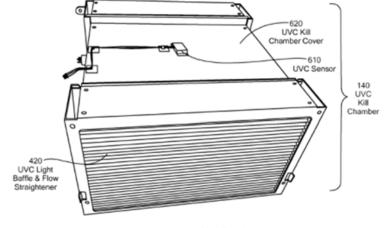


FIG. 6

clearly disclaimed every structure that does not "seal" against escape of the flowable product <u>and</u> ultraviolet radiation is inconsistent with the intrinsic record.²

Finally, Defendants' extrinsic-evidence argument is at best confusing. Despite the fact that neither of the cited dictionaries addresses whether a cover must "seal," Defendants conclude that

According to Defendants, *Poly-America*, *L.P. v. API Industries*, *Inc.*, 839 F.3d 1131 (Fed. Cir. 2016) held that it is irrelevant whether a proposed disclaimer-based construction uses the same terms as the prosecution history. (Dkt. 60 at 4.) The disputed portions of the construction in *Poly-America*, however, in fact were used in the quoted portion of prosecution history. 839 F.3d at 1137. What the Federal Circuit found "irrelevant" was that the "the terms . . . are not present in claim 10." *Id.* That a claim construction includes language not present in the claim itself seems far from surprising. However, an alleged disclaimer that is not based on the purportedly disclaiming language as proposed by Defendants here is not supported by *Poly-America*.

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the dictionaries mandate its construction. (Dkt. 60 at 4.) Defendants' argument, which is unsupported by its proffered evidence, should be rejected.

2. "second compartment defines the volume" ('965 patent, claim 2)

Claim Term	Plaintiff's Proposal	Defendants' Proposal
compartment defines the		Indefinite In the alternative: "only the second compartment is exposed to ultraviolet radiation from the at least one ultraviolet radiation source"

Defendants' primary argument is that this recitation is indefinite. (Dkt. 60 at 5-6.) In particular, Defendants rely on the word "defines" as used to recite the relationship between the "second compartment" and the "volume" in claims 1 and 2 of the '965 patent:

- an ultraviolet radiation containing case configured to enclose a volume corresponding to a flowable liquid product . . .;
- a first compartment configured to store a first portion of the flowable liquid product; and
- a second compartment configured to store a second portion of the flowable liquid product, wherein the second compartment includes a cover at least partially formed by an ultraviolet transparent material, and wherein the second compartment defines the volume such that the at least one ultraviolet radiation source is configured to generate ultraviolet radiation for disinfecting the second portion of the flowable liquid product through the ultraviolet transparent material[.]

Despite their asserted lack of understanding, Defendants concede that the claim language read in context means that "both compartments in claim 2 are part of the volume of claim 1." (Dkt. 60 at 5 (italics in original).) In other words, rather than a lack of reasonable certainty regarding the scope and meaning of claim 2, Defendants' criticism is premised on interpreting the word "defines" in isolation, i.e., that the second compartment is merely another name for the volume. The law, however, does not require absolute clarity to be divined from a claim term in isolation. *Nautilus*, Inc. v. Biosig Instruments, Inc., 572 U.S. 898, 910 (2014) ("the patent's claims, viewed in light of the specification and prosecution history, [must] inform those skilled in the art about the scope of the invention with reasonable certainty"). Here, Defendants concede that the relationship between the "second compartment" and the "volume" is sufficiently clear. (Dkt. 60 at 5.) Thus, Defendants

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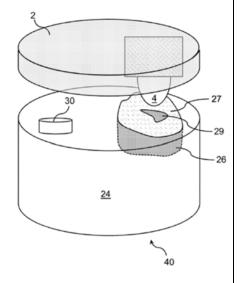
cannot establish indefiniteness by clear and convincing evidence.

The second dispute is whether the phrase "second compartment defines the volume" means that "only the second compartment is exposed to ultraviolet radiation from the at least one ultraviolet radiation source" as Defendants assert. (Dkt 60 at 6.) Defendants fail to justify construing this claim term based on limiting exposure to ultraviolet radiation. In particular, Defendants do not assert that customary and ordinary meaning of word or phrase within the claim addresses radiation exposure, nor do they rely on lexicography or disclaimer. (Id. at 6.) Instead, Defendants merely assert that their interpretation is consistent with "[t]he only embodiments corresponding to claim 2." (Dkt. 60 at 7.) The law is clear, however, that to import limitations in the claims, "[i]t is . . . not enough that the only embodiments, or all of the embodiments, contain a particular limitation." *Thorner*, 669 F.3d at 1366.

In addition, even if consistent disclosure were a sufficient legal basis to import limitations into claims, the predicate of Defendants' argument is wrong. As SETi explained in its Opening Brief:

[F]igure 2B (reproduced to the right) depicts a container (40) having a first compartment (24) and a second compartment (26). (Eisenberg Decl. Ex. 1 at 6:55-7:21). The ultraviolet source (4) is described as providing radiation to the second compartment (26). (Id. at 7:22-35.) And the specification further explains that "any portion of the second compartment [26] can be fabricated using an ultraviolet transparent material." (id. at 7:18-21).

(Dkt. 58 at 7.) Thus, for at least this embodiment, there is no express exclusion of radiation from ultraviolet source (4) reaching the first compartment (24), a fact (and argument) that Defendants ignore.



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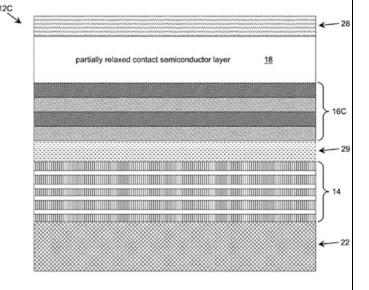
3. "embedded partially relaxed sublayer" ('496 patent, claims 1, 4, 7, 12)

Claim Term	Plaintiff's Proposal	Defendants' Proposal
partially relaxed sublayer"	and/or the n-type contact semiconductor layer incorporates within that layer a	"a sublayer that includes dislocations that reduce stress and is surrounded by the layer it is incorporated into"

According to Defendants, the relevant dispute is whether the "embedded partially relaxed sublayer" can be "simply adjacent to the other layer." (Dkt. 60 at 7-8.) Defendants' characterization of the dispute is wrong. Neither side has proposed a construction encompassing "adjacent." In particular, SETi's proposal requires "incorporat[ion] within." (Dkt. 58 at 7-8.) By creating a new construction to contest, Defendants again leave SETi's position unrebutted.

Defendants next cite to figure 7 (reproduced to the right) and the following sentence: "[a]

partially relaxed p-type contact semiconductor layer 18 and a dislocation blocking structure 16C are shown embedded in the p-type contact semiconductor layer 28." (Dkt. 60 at 8 (citing '496 patent at 7:60-63).) The cited figure, however, does not show layer 18 as "surrounded by" contact layer 28. In addition, as the sentence cited by Defendants helpfully explains, the



dislocation blocking structure 16C of figure 7 is "embedded in" layer 28. Rather than being "surrounded by" layer 18 as Defendants assert, layer 16C contacts electron blocking layer 29.

Defendants' disclaimer argument (Dkt. 60 at 8), is equally misplaced. As described by Defendants, the issue during prosecution was whether "embedded" is broad enough to encompass "adjacent to." (Id.) Again, however, that is not the claim scope that SETi has proposed. In addition, Defendants' assertion that "SETi argued that if Yan's relaxation-enhancement layer 215 were incorporated into Kang's heterostructure, it would not be incorporated as a sublayer within any of the layers of Kang, but instead as a separate layer" (id.), is consistent with SETi's proposal. Fax: 213.896.2450

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Finally, Defendants' selective citation to extrinsic evidence does not support its narrow view. See Phillips, 415 F.3d at 1320-24. Defendants' statement that all of the extrinsic evidence "confirms that 'embedded' means 'surrounded by" (Dkt. 60 at 9) is incorrect. Random House provides a definition of "embed" as "to incorporate or contain as an essential part or characteristic." (Dkt. 62-5 at 635.) Similarly, the Oxford American Dictionary provides a definition of "embed" as "design and build (a microprocessor) as an integral part of a system or device." (Dkt. 62-6.)

"dislocation blocking structure" ('496 patent, claims 1, 7, 12) 4.

Claim Term	Plaintiff's Proposal	Defendants' Proposal
"dislocation blocking structure"	Plaintiff): "an epitaxially grown semiconductor layer having substantially fewer dislocations at a first side than at a second side":	This term is governed by 35 U.S.C. § 112(6). Function: blocking dislocations Structure: a layer including alternating compressive and tensile sublayers, as disclosed in the specification at

Nowhere in their analysis do Defendants acknowledge the presumption that the lack of the word "means" weighs against means-plus-function treatment. (Dkt. 60 at 10-11.) Instead, Defendants merely assert that a claim term ending in the word "structure" "may be . . . tantamount to using the word 'means.'" (*Id.* at 10.)

In addition, although Defendants acknowledge Professor DenBaars's declaration, they confusingly assert that "the three approaches identified by [him] do not always perform the function of blocking dislocations – each of the types of structures can serve other purposes and perform different functions." (Id. at 10.) The substantive issue is whether the claim term connotes definite structure, not whether those structures may be used in other ways. Stated differently, a door stop might work quite well as a paper weight, but the possibility of alternative uses is irrelevant to whether that term connotes sufficiently definite structure to a skilled artisan.

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Defendants also discount the fact that others used the term as the name for a specific structure (Dkt. 60 at 10) and the fact that the examiner treated the recitation as an ordinary recitation rather than a means-plus-function one (id. at 11). In addition, Defendants leave unrebutted SETi's argument that the claim's "wherein" clause limits the purported "means" to include specific structure. (Dkt. 58 at 11). In view of that contrary evidence and the presumption against means-plus-function treatment, the Court should reject Defendants' position.

To the extent that the Court agrees with Defendants' means analysis, the parties also dispute the corresponding structure. Although SETi identified distinct disclosures (Dkt. 58 at 12), Defendants assert that "[e]ach of the supposed 'alternate structures' . . . consists of 'alternating compressive and tensile sublayers." (Dkt. 60 at 11.) SETi disputes Defendants' characterization. As Professor DenBaars stated, a skilled artisan would have understood that "a non-planar growth surface (for example patterning)" or a relaxation layer are dislocation blocking structures. (Dkt. 58-2 ¶¶ 17-18.) That those structures can be used in combination with compressive and tensile layers does not preclude them from being corresponding structures.

5. "graded composition" ('496 patent claims 1, 7, and 12)

Claim Term	Claim Term Plaintiff's Proposal Defendants' Proposal	
"graded composition"	"The composition of the dislocation blocking structure changes across its thickness"	"composition that gradually and monotonically changes from one side to the opposite side"

Although Defendants purport to begin their analysis with the intrinsic evidence, they pointedly skip over the claims themselves, which "[q]uite apart from the written description and the prosecution history . . . provide substantial guidance as to the meaning of particular claim terms." *Phillips*, 415 F.3d at 1314. The full claim term in context is "a dislocation blocking structure located between the partially relaxed sublayer and the light generating structure, wherein the dislocation blocking structure includes a graded composition that changes from a first side of the dislocation blocking structure to a second side thereof."

Importantly, Defendants fail to explain how their construction can be reconciled with its concession that the recited structure can include "alternating compressive and tensile sublayers." (Dkt. 60 at 11, 12.) The flaw in Defendants' reasoning becomes clearer in view of dependent claim

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2, which expressly recites the "dislocation blocking structure [as] include[ing] a plurality of tensile sublayers alternating with a plurality of compressive sublayers." SETi expressly raised the conflict between Defendants' construction and the claim language (Dkt. 58 at 13), which Defendants leave largely unchallenged.

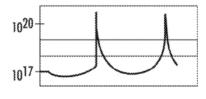
Instead, Defendants assert that their proposal is consistent with the examiner's view. (Dkt. 60 at 12.) In particular, Defendants rely on the examiner's citation to paragraph 14 of the prior art Chua patent as using the term "gradually." (*Id.* citing 58-1 at 84). The relevant paragraph of Chua, however, states in relevant part:

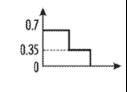
[T]he mixed alloy region may be comprised of a continuum of alternating layers of a higher percentage of AlN . . . and a higher percentage of GaN . . . The thicknesses of the AlN layers gradually decrease from one AlN/GaN pair to the next.

(Dkt. 62-9 ¶ 14). Thus, rather than a gradual or monotonic composition change, the cited passage describes alternating changes in sublayer composition. That repeated pattern is shown, for example, in Chua's figure 2 and described in paragraph 39. (Dkt. 62-9) And importantly, the examiner cited Chua's paragraph 39 in the rejection. (Dkt. 58-1 at 84.) The examiner's view of "graded," therefore, was inconsistent with Defendants' proposal, but entirely consistent with SETi's construction, dependent claim 2, and the specification (see '496 patent at 12:22-32).

Similar to the Chua patent, two other references that were of record during prosecution support SETi's proposal. United States Patent 8,080,833 ("Grandusky") uses the term "grading" describe a layer having a composition that changes in "steps" rather than gradually. (Eisenberg Decl. Ex. 8 at 5:20-24.) Similarly, United States Patent Pub. 2014/0231745 ("Northrup") described a "grading [that] takes place in two steps." (Eisenberg Decl. Ex. 9 ¶ 69; see also id. at ¶ 76 (describing "[a] 'step profile,' as shown in the bottom example of FIG. 18.").) The relevant portion of Northrup's figure 18, which depicts a composition having a "step profile," is reproduced to the

right. And because both Grandusky and Northrup were of record during the prosecution of the '496 patent (see '496





patent at page 2), those references are considered intrinsic evidence rather than extrinsic evidence.

V-Formation, Inc. v. Benetton Grp. SpA, 401 F.3d 1307, 1311 (Fed. Cir. 2005); Open Text S.A. v. Box, Inc., No. 13-CV-04910, 2015 WL 400348, at *2 (N.D. Cal. Jan. 28, 2015).

In a tacit admission that its construction lacks support in the specification, Defendants assert that "dislocation blocking structures can have <u>their stress gradually change</u>." (*Id.* at 13.) The claims, however, <u>do not</u> recite stress changes. Defendants' attempt to find consistency with an entirely different characteristic is irrelevant. Moreover, Defendants' citation supports SETi's construction, because the specification specifically links the stress changes to alternating compositional changes between sublayers. (*See*, *e.g.*, '496 patent at 5:17-59.)

Defendants also criticize SETi's proposal for alleged redundancy. (Dkt. 60 at 12.)

Defendants' error, however, is its failure to recognize that a claim term can define itself. See, e.g., See, e.g., EMED Techs. Corp. v. Repro-Med Sys., Inc., No. 2:15-CV-1167, 2019 WL 1040604, at *9 (E.D. Tex. Mar. 4, 2019); Amgen Inc. v. Mylan Inc., No. 2:17-CV-01235, 2018 WL 6061213, at *9 (W.D. Pa. Nov. 20, 2018); Bedgear, LLC v. Fredman Bros. Furniture Co., No. 2:15-CV-6759, 2019 WL 911301, at *10 (E.D.N.Y. Feb. 25, 2019); Game & Tech. Co. v. Blizzard Entm't, Inc., No. 216CV06499, 2018 WL 3198435, at *13 (C.D. Cal. Apr. 4, 2018); see also Phillips, 415 F.3d at 1314 ("the claims themselves provide substantial guidance as to the meaning of particular claim terms"). Here, the claim recites a structure – "graded composition" – and defines that structure as "chang[ing] from a first side of the dislocation blocking structure to a second side thereof." The claim as written, therefore, provides clarity rather than redundancy.

6. "the difference in the molar fractions . . ." ('468 patent claim 14)

Claim Term	Plaintiff's Proposal	Defendants' Proposal
	,	Indefinite (both apparatus and step of making
of the first layer or the second layer"		apparatus)

For this term, Defendants assert that it is improper to recite a product in terms of that product's features. (Dkt. 60 at 15.) To support that proposition, Defendants cite *In re Downing*, 754 Fed. Appx. 988 (Fed. Cir. 2018), an unpublished Federal Circuit decision. (Dkt. 60 at 15.) In *Downing*, the Court addressed an examiner's rejection during *ex parte* examination. 754 Fed. Appx. 889. The presumption of validity, therefore, did not apply. More importantly, the central

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fact relied upon by the Court in affirming the examiner's indefiniteness rejection was that "the claim limitations . . . are not steps detailing how the claimed product . . . is made, but rather reflect functions performed by the product." Id. at 995. Defendants improperly rewrite Downing to suggest that the law precludes claim recitations directed to "a feature of the product." (Dkt. 60 at 15.) Based on the actual holding in *Downing*, the claim term at issue here is proper, as it does not reflect the function of the product. More specifically, the claim term recites a correlation between the elemental composition (molar fraction) and layer thickness.

The remainder of Defendants' analysis relates solely to enablement (Dkt. 60 at 15-16), and therefore, merits no response at this stage.

7. "the material" ('468 patent claim 26)

Claim Term	Plaintiff's Proposal	Defendants' Proposal
	Refers back to the recitations: "a first layer composed of a material" and "a second layer composed of a material" for antecedent basis, <i>i.e.</i> , the first layer and second layer are both aluminum gallium nitride.	Indefinite

Defendants assert that this term is indefinite for lack of antecedent basis. (Dkt. 60 at 17.) Defendants' view of the law is wrong. Certainty is not a requirement of claim drafting. Instead, courts "must take into account the inherent limitations of language." Nautilus, 134 S. Ct. at 2128; see also id. ("Some modicum of uncertainty . . . is the price of ensuring the appropriate incentives for innovation."). The court's analysis in Wi-LAN Inc. v. LG Elecs., Inc., No. 18-CV-01577, 2019 WL 2270434, at *13 (S.D. Cal. May 28, 2019), is instructive. There, the defendant asserted that a claim term could rely on either of two recited elements for antecedent basis. Id. Based on the language of the claim and the specification, the court resolved the purported ambiguity. *Id.* at 12-13; see also Huawei Techs., Co, Ltd v. Samsung Elecs. Co, Ltd., 340 F. Supp. 3d 934, 981 (N.D. Cal. 2018) (replying on the claims and specification to resolve antecedent basis).

Defendants correctly point out that the '468 patent describes a number of aluminum-based materials for use in dislocation bending structures. (Dkt. 60 at 18.) As SETi explained, the specification (including the Abstract) consistently explains that the dislocation bending structure's layers can be comprised of the same material. (Dkt. 58 at 16-17 (citing '468 patent at Abstract,

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4:27-28; 7:5-7); see also '468 patent at 2:35-38.) Rather than acknowledge or address those disclosures, Defendants assert that SETi's construction would "exclude preferred embodiments." (Dkt. 60 at 18.) Defendants, however, fail to provide a citation to those alleged "preferred embodiments." That lack of citation is telling, and is reinforced by the fact that the '468 patent does not refer to any specific "preferred" embodiment. Instead, it merely discloses embodiments, including ones that use the same material for adjacent layers. ('468 patent at 7:5-12.)

In addition to incorrectly asserting that SETi's construction excludes "preferred embodiments," Defendants also misstate the relevant law. Properly stated, the relevant rule is that "a construction which excludes the preferred embodiment is 'rarely, if ever correct." PPC Broadband, Inc. v. Corning Optical Commc'ns RF, LLC, 815 F.3d 747, 755 (Fed. Cir. 2016) (citation omitted). As the Court has clarified, "[t]his does not mean, however, that each and every claim ought to be interpreted to cover each and every embodiment." *Id.* (citation omitted).

8. "each period including two layers . . ." ('133 patent claim 19)

Claim Term	Plaintiff's Proposal	Defendants' Proposal
"each period including	"The first [second] superlattice includes a	Indefinite
two layers formed of	repeating pattern of pairs of layers, each	
group III nitride materials	layer includes nitrogen, aluminum and	
having molar fractions	another group III element, and the repeating	
x [y] and x' [y'], where	pattern includes repeating the same	
x>x' [y>y']''	higher/lower aluminum molar fraction in	
	each pair"	

Defendants assert that SETi's construction is incorrect because, "AlGaN superlattices may be a preferred embodiment, but they are not the only embodiment." (Dkt. 60 at 19.) SETi's construction, however, is not limited to AlGaN, rending Defendants' criticism misplaced.

In addition to misreading SETi's proposed construction, Defendants also fail to address the claim terms in context. In particular, Defendants purport to identify eleven different group III nitrides. Some of those examples, however, conflict with the claim, which specifies that the layers are "formed of group III nitride materials including aluminum." Although Defendants elided the underlined language during term selection, that does not change the claim term's proper meaning.

Finally, Defendants' criticism that SETi interpreted "molar fraction" improperly by referencing the specification is incorrect. Defendants' primary argument is indefiniteness, which

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requires Defendants to show by clear and convincing evidence that "[the] claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." Nautilus, 572 U.S. at 901. SETi properly construed the claim terms in view of the specification (Dkt. 58 at 18; see also Exmark Mfg. Co. Inc. v. Briggs & Stratton Power Prod. Grp., LLC, 879 F.3d 1332, 1345 (Fed. Cir. 2018)), which Defendants leave effectively unrebutted.

9. "short period superlattice" ('420 patent claims 1, 2, 4, 13, 14)

Claim Term	Plaintiff's Proposal	Defendants' Proposal
superlattice"	barrier sublayers alternating with a	"a superlattice having a few- monolayer-thick wells and
	are thin enough to provide carrier	barriers, in which the barriers are thin enough that carriers tunnel through them"

The premise of Defendants' argument is that the art applies a strict thickness definition to short period superlattices. Defendants' analysis is flawed.

The primary flaw in Defendants' analysis is the assumption that the claimed short-period superlattice was defined in the cited extrinsic articles. The '420 patent confirms that the claimed structure was considered a novel aspect of the invention. (See, e.g., '420 patent at 2:33-5:7 ("Summary of the Invention"); 11:6-12:26.) Indeed, Defendants concede that the structure is not a generic short-period superlattice (Dkt. 60 at 23 ("The SPSL of the '420 patent claims is a particular SPSL designed to have particular conductivity and transparency properties.").) That is precisely why relying on extrinsic evidence as definitional is misdirected. Phillips, 415 F.3d at 1322 ("discrepancies between the patent and treatises are apt to be common because the patent by its nature describes something novel").

Relatedly, Defendants' proposed limit on thickness is expressly tied to "tunneling." (Dkt. 60-22 ("Prof. Depuis confirms that SPSL is a term of art, and explains its meaning in his declaration, including the crucial difference between a regular superlattice and an SPSL: an SPSL amply allows carrier tunneling through its barrier layers.").) As SETi explained, however, conduction through the inventive short-period superlattice is not limited to tunneling. (Dkt. 58 at 20-21 (citing '420 patent at 12:9-13).) Here again, Defendants simply ignore SETi's argument

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based on contrary intrinsic evidence (Dkt. 60 at 20-23 (citing '420 patent at 12:9-13), insisting that extrinsic evidence defines the disputed term.

10. "transparent regions" ('420 patent claims 1 and 13)

Claim Term	Plaintiff's Proposal	Defendants' Proposal
"transparent	Plain and ordinary meaning, or in	Indefinite
regions"	the alternative "regions of the	In the alternative:
	barrier that permit light at or near a	"distinct regions that have a transmission
	target wavelength to pass through"	coefficient of at least 50% for a target
		wavelength"

Although the final term is "transparent regions," the underlying dispute relates solely to the scope of the term transparent. In particular, Defendants assert that a skilled artisan would not have understood that term with reasonable certainty. Rather than the scope and meaning of the simple word "transparent," however, Defendants seek to both broaden and narrow that term based on allegations of indefiniteness and also by improperly importing limitations from the specification.

Consistent with its stilted view of indefiniteness, Defendants analyze the disputed term in the abstract rather than in the context of the intrinsic record. (Dkt. 60 at 24-25.) For example, Defendants claim a person of ordinary skill would find the term "transparent" unclear because transparency to radiation as disparate as radio waves and X-rays is not specifically included or excluded. (Id. at 24.) The intrinsic record, however, makes no mention of those parts of the spectrum, rendering Defendants' argument irrelevant. Indeed, by Defendants' reasoning, a person having ordinary skill would be incapable of assessing whether ordinary windows are transparent without considering the entire spectrum. Instead, the issue presented is whether a person of ordinary skill could comprehend the term with "reasonable certainty" based on "the patent's claims, viewed in light of the specification and prosecution history." Nautilus, 572 U.S. at 910. In other words, rather than consideration in the <u>abstract</u>, the person of ordinary skill would have access to all of the <u>context</u> provided by the intrinsic record.

The intrinsic record here provides clear guidance on what transparent means in the context of the '420 patent. For example, claim 7 helps provide scope and meaning to "transparent" by relating that term to "an average transmission coefficient for radiation of a target wavelength." The transmission coefficient is explained in the "Summary of the Invention" as the inverse of

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absorption. ('420 patent at 3:35-45; see also id. at 3:61-63.) In other words, the light transmitted through is what is left over after absorption.

In addition, the '420 patent repeatedly links transparency to a characteristic wavelength of the device. ('420 patent at 3:61-62 (describing a "target radiation wavelength"); 7:21-31 (describing transparency in the context of ultraviolet light created by the device); 9:61-67; 10:4-11 (explaining how a crystal can be designed to correspond to a target wavelength). Figures 11 and 12 provide additional context by relating absorption to a specific region of the spectrum that extends from approximately 210 nanometers to 340 nanometers (a portion of the ultraviolet spectrum).

Defendants ignore the intrinsic record's context by asserting that the claimed devices "could be transistors that never receive or emit light." (Dkt. 60 at 24.) Again, however, that theory lacks any foundation in the intrinsic record. To the contrary, when identifying the "Technical Field," the specification states "[t]he disclosure relates generally to emitting devices, and more particularly, to an emitting device with improved efficiency." ('420 patent at 1:38-40.) Consistent with that description, the "Background Art" section, the "Summary of the Invention" section, and the "Detailed Description" all focus on emitting devices. (See, e.g. id. at 1:44-55; 3:35-45; 6:5-23.) It is within that context that a person having ordinary skill would consider whether the term transparent is sufficiently clear, *Nautilus*, 572 U.S. at 901, an issue that Defendants substantially ignore despite bearing the burden of proof by clear and convincing evidence. The Court, therefore, should reject Defendants' position.

Finally, as to their 50% alternative construction, Defendants provide no lexigraphic or disclaimer-based argument to justify importing that requirement into the term. And as SETi explained, Defendants' position is further weakened by the express language of claim 7. (Dkt. 58 at 23.) Defendants' alternative construction, therefore, is improper.

III. **CONCLUSION**

For the foregoing reasons, SETi requests the Court adopt its proposed constructions and reject Defendants'.